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1 **Propagation of Electromagnetic Waves at MHz Frequencies Through Seawater**
Al-Shamma'a, A.I.; Shaw, A.; Saman, S.;
Antennas and Propagation, IEEE Transactions on , Volume: 52 , Issue: 11 , N 2004
Pages:2843 - 2849

[Abstract] [PDF Full-Text (1160 KB)] **IEEE JNL**

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2 **A vehicle-borne urban 3-D acquisition system using single-row lase range scanners**
Huijing Zhao; Shibasaki, R.;
Systems, Man and Cybernetics, Part B, IEEE Transactions on , Volume: 33 , Is 4 , Aug. 2003
Pages:658 - 666

[Abstract] [PDF Full-Text (3266 KB)] **IEEE JNL**

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3 **An algorithm for distinguishing the types of objects on the road usi laser radar and vision**
Shimomura, N.; Fujimoto, K.; Oki, T.; Muro, H.;
Intelligent Transportation Systems, IEEE Transactions on , Volume: 3 , Issue: 3 , Sept. 2002
Pages:189 - 195

[Abstract] [PDF Full-Text (302 KB)] **IEEE JNL**

4 **An obstacle detection method by fusion of radar and motion stereo**
Kato, T.; Ninomiya, Y.; Masaki, I.;
Intelligent Transportation Systems, IEEE Transactions on , Volume: 3 , Issue: 3 , Sept. 2002
Pages:182 - 188

[Abstract] [PDF Full-Text (287 KB)] **IEEE JNL**

5 **The Torus Treadmill: realizing locomotion in VEs**
Iwata, H.;
Computer Graphics and Applications, IEEE , Volume: 19 , Issue: 6 , Nov.-Dec. 1999
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[Abstract] [PDF Full-Text (788 KB)] **IEEE JNL**

6 **Vision-only aircraft flight control**
De Wagter, C.; Proctor, A.A.; Johnson, E.N.;
Digital Avionics Systems Conference, 2003. DASC '03. The 22nd , Volume: 2 , 16 Oct. 2003
Pages:8.B.2 - 81-11 vol.2

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7 **Road detection and vehicles tracking by vision for an on-board ACC system in the VELAC vehicle**
Chapuis, R.; Marmoiton, F.; Aufrere, R.; Collange, F.; Derutin, J.;
Information Fusion, 2000. FUSION 2000. Proceedings of the Third Internation Conference on , Volume: 2 , 10-13 July 2000
Pages:WEB5/11 - WEB5/18 vol.2

[Abstract] [PDF Full-Text (688 KB)] **IEEE CNF**

8 **Improvement of odometry for omnidirectional vehicle using optical information**
Nagatani, K.; Tachibana, S.; Sofne, M.; Tanaka, Y.;
Intelligent Robots and Systems, 2000. (IROS 2000). Proceedings. 2000 IEEE/ International Conference on , Volume: 1 , 31 Oct.-5 Nov. 2000
Pages:468 - 473 vol.1

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9 **Docking to pallets with feedback from a sheet-of-light range camer**
Nygards, J.; Hogstrom, T.; Wernersson, A.;
Intelligent Robots and Systems, 2000. (IROS 2000). Proceedings. 2000 IEEE/ International Conference on , Volume: 3 , 31 Oct.-5 Nov. 2000
Pages:1853 - 1859 vol.3

[Abstract] [PDF Full-Text (480 KB)] **IEEE CNF**

10 **A vision navigation algorithm based on linear lane model**
Xu Youchun; Wang Rongben; Libing; Ji Shouwen;
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Pages:240 - 245

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12 **Vision for longitudinal vehicle control**
McLauchlan, P.F.; Malik, J.;
Intelligent Transportation System, 1997. ITSC 97. IEEE Conference on , 9-12 1997
Pages:918 - 923

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13 **Autonomous robot navigation for precision horticulture**
Hague, T.; Marchant, J.A.; Tillett, N.D.;
Robotics and Automation, 1997. Proceedings., 1997 IEEE International Confer on , Volume: 3 , 20-25 April 1997
Pages:1880 - 1885 vol.3

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14 **Vision based autonomous underwater vehicle navigation: underwa cable tracking**
Balasuriya, B.A.A.P.; Takai, M.; Lam, W.C.; Ura, T.; Kuroda, Y.;
OCEANS '97. MTS/IEEE Conference Proceedings , Volume: 2 , 6-9 Oct. 1997
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15 **The implementation of a vehicle identification function for a longitudinal ranging system**
Hattori, M.;
Intelligent Vehicles Symposium, 1996., Proceedings of the 1996 IEEE , 19-20 1996
Pages:25 - 28

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1 2 3 Next

An obstacle detection method by fusion of radar an motion stereo

Kato, T. Ninomiya, Y. Masaki, I.

Toyota Central R&D Labs. Inc., Aichi, Japan

This paper appears in: **Intelligent Transportation Systems, IEEE Transac**

Publication Date: Sept. 2002

On page(s): 182 - 188

Volume: 3 , Issue: 3

ISSN: 1524-9050

Inspec Accession Number: 7406583

Abstract:

In order to avoid collision with an object that blocks the course of a **vehicle**, the **distance** to it and detecting **positions** of its side boundaries, are necess paper, an object detection method achieved by the fusion of millimeter-wave single video camera is proposed. We consider the method as the least expens because at least one camera is necessary for lane marking detection. In the n distance is measured by the radar, and the boundaries are found from an ima sequence, based on a motion stereo technique with the help of the distance n the radar. Since the method does not depend on the appearance of objects, it of detecting not only an automobile but also other objects. Object detection b method was confirmed through an experiment. In the experiment, both a sta a moving object were detected and a pedestrian as well as a vehicle was dete

Index Terms:

collision avoidance **distance** measurement object detection radar applications ro sensor fusion stereo **image** processing collision avoidance **distance** measurement sequence lane marking detection millimeter-wave radar motion stereo technique object object detection obstacle detection method pedestrian sensor fusion sta object vehicle video camera

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16 **A complex control method for an intelligent mobile vehicle**
Sugisaka, M.; Xin Wang;
Intelligent Vehicles Symposium, 1996., Proceedings of the 1996 IEEE , 19-20 1996
Pages:53 - 57

[Abstract] [PDF Full-Text (320 KB)] **IEEE CNF**

17 **Experience with Visual Robot Navigation**
Matthies, L.; Thorpe, C.;
OCEANS , Volume: 16 , Sep 1984
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18 **Extraction and tracking of the license plate using Hough transform voted block matching**
Yanamura, Y.; Goto, M.; Nishiyama, D.; Soga, M.; Nakatani, H.; Saji, H.;
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Yajun Fang; Masaki, I.; Horn, B.;
Intelligent Vehicle Symposium, 2002. IEEE , Volume: 2 , 17-21 June 2002

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Jin Woo Lee; Jung Ho Kim; Young Jin Lee; Kwon Soon Lee;
Industrial Electronics, 2002. ISIE 2002. Proceedings of the 2002 IEEE Interna Symposium on , Volume: 2 , 8-11 July 2002
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Control Applications, 1999. Proceedings of the 1999 IEEE International Confer on , Volume: 2 , 22-27 Aug. 1999
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Power Electronics and Drive Systems, 1999. PEDS '99. Proceedings of the IEE
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monitoring system for mobile robot guidance
Laloni, C.; Gutsche, R.; Wahl, F.M.;
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Pages:591 - 596 vol.1

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30 **Real-time vision-based tracking of submarine-cables for AUV/ROV**
Matsumoto, S.; Ito, Y.;
OCEANS '95. MTS/IEEE. 'Challenges of Our Changing Global Environment'.
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Pages:1997 - 2002 vol.3

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Collision avoidance using artificial retina sensor in

Kim, K.I. Shin, C.W. Inoguchi, S.

Pohang Inst. of Sci. & Technol., South Korea;

This paper appears in: **Intelligent Vehicles '95 Symposium., Proceeding**

Meeting Date: 09/25/1995 - 09/26/1995

Publication Date: 25-26 Sept. 1995

Location: Detroit, MI USA

On page(s): 183 - 187

Reference Cited: 13

Inspec Accession Number: 5107096

Abstract:
The artificial retina sensor (ARS) which was developed at Osaka University in applied to PRV II (POSTECH Road Vehicle II) for real time collision avoidance speed navigation. ARS consists of a linear CCD sensor and a dove prism rotat of the camera lens. Since ARS provides polar domain images directly from the and projection invariance in a polar coordinate system can be utilized directly only has to apply an edge detection and a template matching method to the h direction. Then optical-flow of moving objects is estimated to obtain 3D distar time-to-impact informations from obstacles. To verify the validity of the the a proposed technique, real images are taken using an ARS mounted on PRV II a analyzed

Index Terms:
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Pohang Inst. of Sci. & Technol., South Korea;

This paper appears in: **Intelligent Vehicles '95 Symposium., Proceeding**

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Publication Date: 25-26 Sept. 1995

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Vehicle II PRV II artificial retina sensor collision avoidance dove prism rotating
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object detection optical-flow polar coordinate system polar domain **images** **posit**
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An integrated stereo-based approach to automatic guidance

Luong, Q.-T. Weber, J. Koller, D. Malik, J.

Dept. of Comput. Sci., California Univ., Berkeley, CA, USA;

This paper appears in: **Computer Vision, 1995. Proceedings., Fifth Inter Conference on**

Meeting Date: 06/20/1995 - 06/23/1995

Publication Date: 20-23 June 1995

Location: Cambridge, MA USA

On page(s): 52 - 57

Reference Cited: 18

Inspec Accession Number: 5032540

Abstract:
Proposes a new approach for vision-based longitudinal and lateral **vehicle** co novel feature of this approach is the use of binocular vision. We integrate two consisting of a new, domain-specific, efficient binocular stereo algorithm, and marker detection algorithm, and show that the integration results in a improv performance for each of the modules. Longitudinal control is supported by de measuring the **distances** to leading **vehicles** using binocular stereo. The knc the camera geometry with respect to the locally planar road is used to map th of the road plane in the two camera views into alignment. This allows us to se **image** features into those lying in the road plane, e.g. lane markers, and tho other objects which are dynamically integrated into an obstacle map. Therefo contrast with the previous work, we can cope with the difficulties arising from of lane markers by other **vehicles**. The detection and measurement of the la provides us with the **positional** parameters and the road curvature which are lateral vehicle control. Moreover, this information is also used to update the c geometry with respect to the road, therefore allowing us to cope with the pro vibrations and road inclination to obtain consistent results from binocular ster

Index Terms:

alignment automatic **vehicle** guidance binocular stereo binocular vision camera g
camera views computer vision **distance** detection **distance** measurement domai
efficient binocular stereo algorithm **image** feature mapping integrated stereo-based a
lane marker detection algorithm leading **vehicles** locally planar road modules obs
occlusion performance **positional** parameters road **vehicles** stereo **image** proce
tracking traffic control traffic engineering computing vibrations vision based latera
control vision based longitudinal **vehicle** control alignment automatic **vehicle** guida
binocular stereo binocular vision camera geometry camera views computer visior
detection **distance** measurement domain-specific efficient binocular stereo algorithm
feature mapping integrated stereo-based approach lane marker detection algorithm
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31 **Collision avoidance using artificial retina sensor in ALV**
Kim, K.I.; Shin, C.W.; Inoguchi, S.;
Intelligent Vehicles '95 Symposium., Proceedings of the , 25-26 Sept. 1995
Pages:183 - 187

[Abstract] [PDF Full-Text (672 KB)] **IEEE CNF**

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32 **Understanding driving situations using a network model**
Ito, T.; Yamada, K.; Nishioka, K.;
Intelligent Vehicles '95 Symposium., Proceedings of the , 25-26 Sept. 1995
Pages:48 - 53

[Abstract] [PDF Full-Text (452 KB)] **IEEE CNF**

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33 **An integrated stereo-based approach to automatic vehicle guidanc**
Luong, Q.-T.; Weber, J.; Koller, D.; Malik, J.;
Computer Vision, 1995. Proceedings., Fifth International Conference on , 20-2 June 1995
Pages:52 - 57

[Abstract] [PDF Full-Text (556 KB)] **IEEE CNF**

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